CITY OF FREMONT RESIDENTIAL TRAFFIC CALMING PROGRAM

Executive Summary

The primary goal of the residential traffic calming program is to have guidelines and set procedures to address neighborhood speeding and bypass traffic on residential streets. The City of Fremont Residential Traffic Calming Program is based on the experience and lessons learned from the Eggers Drive Pilot Traffic Calming Project, the City's Speed Lump Policy and successful elements of other cities traffic calming programs.

The residential traffic calming program requires strong community support and participation by affected residents and property owners. It involves a review of the streets accident history, speed data, and traffic volumes. Installation of the traffic calming devices requires specific design criteria and warrants be satisfied. The residential traffic calming program provides a structured planning process and is flexible enough to adjust to the challenges of each unique project.

Residential Traffic Calming Program Objectives

- Reduce vehicle traffic speeds on two-lane residential streets.
- Encourage non-neighborhood bypass traffic on two-lane residential collector and local streets to use major arterial streets when traveling to and from their neighborhood.
- Enhance safety for residents, pedestrians, bicyclists, and motorists.
- Maintain and enhance neighborhood livability.

Residential Traffic Calming Policy Guidelines

- A combination of education, enforcement and engineering methods will be used in the City's residential traffic calming program. Traffic calming devices will be planned, designed and used in keeping with sound engineering and planning practices. The City Engineer will recommend the installation of traffic calming devices such as speed lumps, center islands, traffic circles and other approved traffic calming devices in this policy to accomplish the residential traffic calming program objectives. Installation of traffic calming devices will require the approval of the City Council.

- The installation of traffic calming devices will require strong community support by residents living on the affected street segment. A warrant analysis for the installation of traffic calming devices will be conducted based on accident data, speed data, traffic volumes and standard design criteria.

- Traffic calming measures on residential streets will be installed to reduce traffic speeds. Non-neighborhood or bypass traffic will be encouraged to use major arterial streets. Some diversion from a traffic managed street to an adjacent street will be unavoidable. An increase of up to 25% of existing average daily traffic (ADT) or 500 vehicles per day, whichever is less will trigger an analysis of the adjacent street.

- Installation of traffic calming devices will only be considered on two-lane residential streets with a posted speed limit of 25 miles per hour.

- Emergency vehicle access will be accommodated in all residential traffic calming plans. Traffic calming devices will be installed only with the consent of the Fire and Police Departments.

- Reasonable automobile, pedestrian and bicycle access should be maintained on residential streets with traffic calming devices.

- Traffic calming devices will not inhibit or significantly impact transit, waste disposal trucks and other service vehicles.

- Removal of some on-street parking spaces may be necessary to install certain types of traffic calming devices. The parking needs of residents will be balanced with the neighborhood's desire for the installation of traffic calming devices.

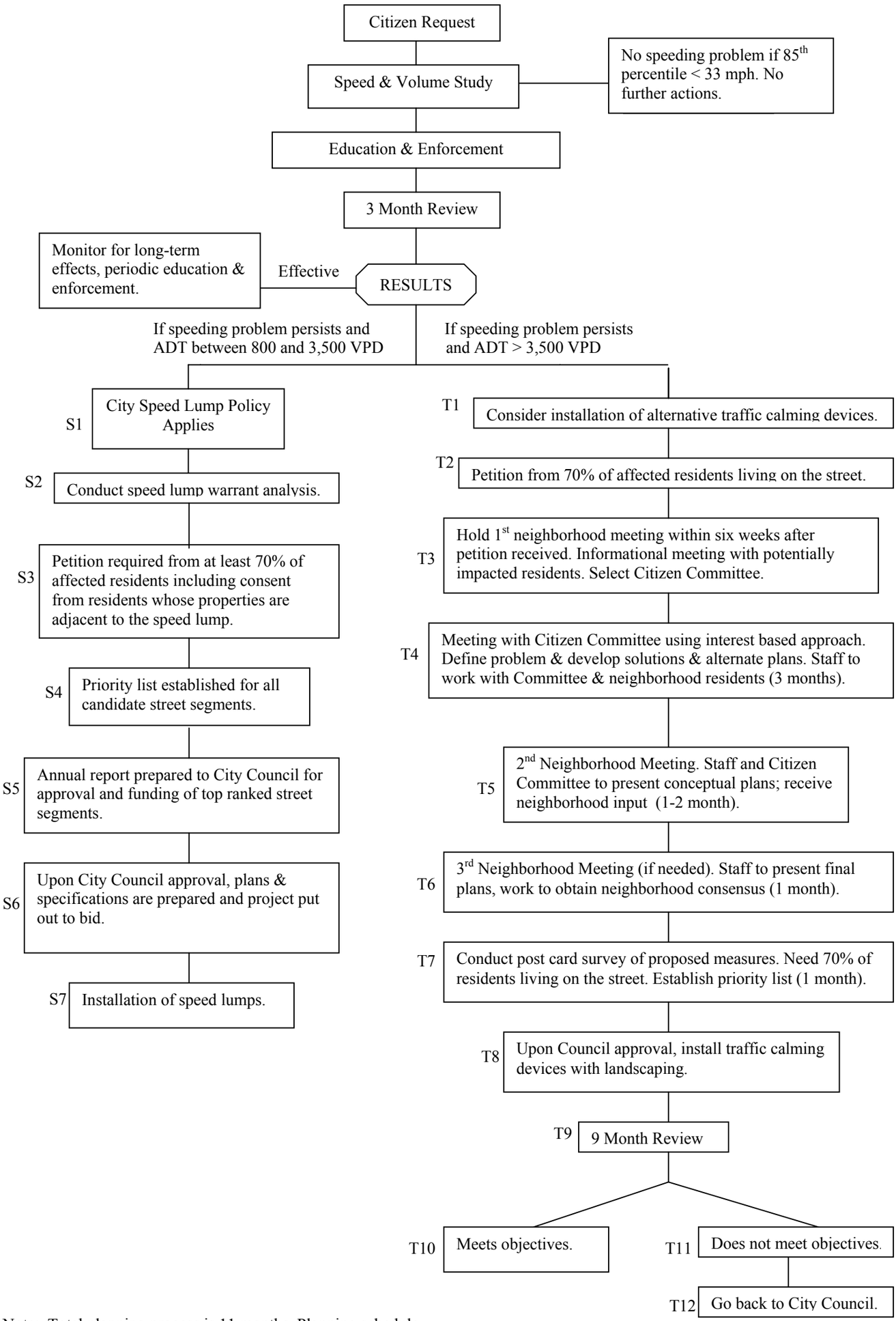
- The speed lump will be the traffic calming device considered for residential streets with an average daily traffic between 800 vehicles per day to 3,500 vehicles per day.

- Installation of alternative traffic calming devices such as traffic circles, center islands, chicanes (triangular islands), neck downs, modified T-intersections and speed tables/raised crosswalks will only be considered for residential streets that have average daily traffic greater than 3,500 vehicles per day.

- The City of Fremont Residential Traffic Calming Program flow chart is shown in page 4.

- A complete description of the seven traffic calming devices and the criteria for installation of these devices is described in pages 8 to 14.

Residential Traffic Calming Program Flow Chart



Note: Total planning process is 11 months. Planning schedule may be shortened dependent on scope of project and if neighborhood consensus is achieved early in the planning process.

Types of Traffic Calming Devices

The following pages consists of the description of the seven traffic calming devices to be used in the residential traffic calming program. The devices listed (see Table 1) are designed to slow traffic by the following methods: (1) narrowing of street such as center islands; (2) horizontal or lateral deflection such as the use of chicanes and traffic circles; (3) vertical deflection – use of vertical force to cause vehicles to slow down, such as speed lumps. Traffic calming devices that would divert traffic to other streets by channeling traffic, e.g. traffic islands (that force right or left-turn movements) or barriers that limit or close street access will not be permitted, and are not included in the traffic calming program.

The City will proceed with the installation of traffic calming devices only if all the criteria outlined in this policy for each device (see pages 8 to 14) is satisfied. Installation of traffic calming devices will be based on safety considerations, speed analysis, volume data, review of accident history, and other special studies pertinent to the project. The City Engineer will recommend the installation of traffic calming measures and will require the approval of the City Council. The City will consider resident support for traffic calming in determining whether or not there is a need to reduce speed in a project area. If petitions in support of traffic calming are signed by less than 70% of residents within the project area, the City will proceed with a traffic calming plan only if all other criteria outlined in this Policy support a need for installation based on safety considerations.

Construction of the traffic calming devices such as the traffic circles, chicanes, center islands, modified T-intersections, neckdown or curb extensions will be constructed in accordance to existing City design standards for curbs, gutter, sidewalk, street pavement, drainage, and landscaping.

The traffic calming devices used in this policy will be governed by standard engineering design principles for roadway geometry, signing and markings. Design and dimensions of traffic calming devices will be derived using geometric design principles in the California Highway Design Manual and/or American Association of State Highway and Transportation Officials' (AASHTO) "A Policy on Geometric Design of Highways and Streets. No standard specifications were developed for the alternative traffic calming devices due to the varying roadway geometry which would affect dimensions and placement of traffic calming devices. Non-standardization of the devices will allow the City flexibility in its design for each unique project. After the City has gained experienced in the design and construction of alternative traffic calming devices, the City may consider standardization of these devices. The City has adopted a standardize design for the speed lump.

The signing and marking of traffic calming devices will use signing, striping and marking consistent with the practices in the California Highway Transportation Manual and/or the Federal Highway Administration's Manual on Uniform Traffic Control Devices for

Streets and Highways (MUTCD). The 2000 MUTCD currently gives guidance in the striping and signing of speed bumps, speed tables, traffic circles and center islands. These manuals give guidance and recommendation in standard signing, striping and marking of objects within the roadway.

A complete description of the traffic calming devices, and the criteria for the installation of these devices are included in pages 8 to 14. The traffic calming devices are as follows:

- Speed Lumps
- Modified T-Intersections
- Traffic Circles
- Chicanes
- Neckdowns
- Center Islands
- Speed Tables/Raised Crosswalks

SPEED LUMPS

Speed lumps are modified speed bumps intended to slow traffic. These devices are installed on residential streets with a speeding problem and where the average daily traffic is between 800 to 3,500 vehicles per day. Speed lumps can better accommodate fire vehicles than the standard speed bumps because the speed lumps have a cut through which matches the wheelbase of the fire vehicle axle. The cut through of the speed lump is typically located equidistant to the centerline of the street. The cut through eliminates the jolt fire personnel would normally experience when driving over a speed bump.

Positive Impacts:
Speed lumps are self-enforcing; the Police Department expends less effort to gain voluntary compliance to the speed limit. Speed lumps reduce neighborhood traffic speeds while allowing fire vehicles to maintain their speed when traversing over the lumps. The lumps also minimize the physical impacts or jolts experienced by the fire crews.

Negative Impacts:
Emergency vehicles must travel along the center of the roadway, partially encroaching onto the opposing travel lane in order to use the cut through of the speed lumps.

The Criteria:
Criteria for installation of this device include the following:

- Two lane residential streets.
- Street width of 40’ or less.
- Posted speed limit of 25 miles per hour.
- 15% of traffic traveling 33 miles per hour or greater.
- ADT between 800 and 3,500 vehicles per day.
- Fire and Police Department Consent.
- Improved streets with curb and gutter.
- 6% or less street longitudinal grade.
- Centerline curve radius of 300’ or more.
- Street segment at least 750’ long.
- Single family homes or multi-dwelling residential units on one side of the street.
- Driveway access maintained.
- Greater than 150’ from the beginning or end of the curved street section.
- Greater than 100’ from an intersection.

Approval:
At the recommendation of the City Engineer, approval of City Council, support by 70% of residents living on the affected street segment and support by 3 out of 4 residents adjacent to the proposed speed lump location.

Removal:
At the recommendation of the City Engineer, approval of City Council and support by 90% of residents, speed lumps may be removed. Residents shall bear the full cost of the removal of the devices if not justified.

MODIFIED T-INTERSECTIONS

Modified T-intersections are raised bulb shaped islands installed at T-intersections. The device is used to slow through traffic approaches of T intersections by channeling motorists to travel around the bulb shaped island. While not commonly used, these islands are one of the few devices used for T-intersections in order to create a lateral deflection for through traffic.

This device should be placed a minimum of 200' apart from other devices but more typically 300' to 400' spacing from other devices.

Positive Impacts:
Modified T- intersections are self-enforcing; the Police Department expends less effort to gain voluntary compliance to the speed limit. Reduced overall speeds at or near T-intersections.

Negative Impacts:
May slow response time of emergency vehicles and requires removal of on-street parking.

The Criteria:
Criteria for installation of this device include the following:

- Two lane residential streets.
- Street width of 40' or less.
- Posted speed limit of 25 miles per hour.
- 15% of traffic traveling 33 miles per hour or greater.
- ADT greater than 3,500 vehicles per day.
- Fire and Police Department Consent.
- Improved streets with curb and gutter.
- 6% or less street longitudinal grade.
- Centerline curve radius of 300' or more.
- Street segment at least 750' long.
- Single family homes or multi-dwelling residential units on one side of the street.
- Driveway access maintained.

Approval:
At the recommendation of the City Engineer, approval of City Council, support by 70% of residents living along the affected street segment and 100% approval by residents adjacent to the device to remove on-street parking.

Removal:
At the recommendation of the City Engineer, approval of City Council and support by 90% of residents, the traffic calming device may be removed. Residents shall bear the full cost of the removal of the devices if not justified.

TRAFFIC CIRCLES

Traffic circles are raised circular islands, placed at the center of an intersection. The main purpose of a traffic circle is to reduce vehicle speeds at or near intersection locations and to control right of way. Traffic circles reduce traffic speeds by horizontal deflection of the straight–through movement at an intersection. Traffic circles may be installed at uncontrolled or controlled intersections with yield signs or stop signs if warrants are met. This device should be placed a minimum of 200' from other devices but more typically 300' to 400' from other devices.

Positive Impacts:
Traffic circles are self-enforcing; the Police Department expends less effort to gain voluntary compliance to the speed limit. Traffic circles reduce traffic speeds at or near the intersections. Studies have shown that collisions may be reduced by up to 80% were these devices have been installed.

Negative Impacts:
May prevent large vehicles to turn around small-radius curves. Traffic circles may cause confusion to motorists traveling through the intersection. Requires removal of on-street parking. Bicyclists must merge with traffic around the circle.

The Criteria:
Criteria for installation of this device include the following:

- Two lane residential streets.
- Street width of 40' or less.
- Posted speed limit of 25 miles per hour.
- 15% of traffic traveling 33 miles per hour or greater.
- ADT greater than 3,500 vehicles per day.
- Fire and Police Department Consent.
- Improved streets with curb and gutter.
- 6% or less street longitudinal grade.
- Centerline curve radius of 300' or more.
- Street segment at least 750' long.
- Single family homes or multi-dwelling residential units on one side of the street.
- Driveway access maintained.

Approval:
At the recommendation of the City Engineer, approval of City Council, support by 70% of residents living on the affected street segment and 100% approval of residents adjacent to the traffic circle to remove on-street parking.

Removal:
At the recommendation of the City Engineer, approval of City Council and support by 90% of residents, the traffic circle may be removed. Residents shall bear the full cost of the removal of the devices if not justified.

CHICANES

Chicanes are raised triangular islands placed adjacent to the curb on alternate sides of the street forming S-shape curved path. These devices are used to slow traffic by requiring motorists to negotiate the narrowed street along the curved path. Center islands may be installed parallel to the chicanes to discourage speeding motorists from driving a straight path across the center island or speeding through the curves.

The devices should be placed in pairs on alternate sides of the street. Each pair combination should be spaced 300' to 400'from other devices.

Positive Impacts:
Chicanes are self-enforcing; the Police Department expends less effort to gain voluntary compliance to the speed limit. Chicanes help to reduce traffic speeds on straight neighborhood street segments.

Negative Impacts:
May slow response time of emergency vehicles, requires removal of on-street parking spaces.

The Criteria:
Criteria for installation of this device include the following:

- Two lane residential streets.
- Street width of 40' or less.
- Posted speed limit of 25 miles per hour.
- 15% of traffic traveling 33 miles per hour or greater.
- ADT greater than 3,500 vehicles per day.
- Fire and Police Department Consent.
- Improved streets with curb and gutter.
- 6% or less street longitudinal grade.
- Centerline curve radius of 300' or more.
- Street segment at least 750' long.
- Single family homes or multi-dwelling residential units on one side of the street.
- Driveway access maintained.

Approval:
At the recommendation of the City Engineer, approval of City Council, support of 70% of residents living on the affected street segment and 100% approval by residents adjacent to the proposed device location to remove on-street parking.

Removal:
At the recommendation of the City Engineer, approval of City Council and support by 90% of residents, the Chicanes may be removed. Residents shall bear the full cost of the removal of the devices if not justified.

NECKDOWNS

Neckdowns are curb extensions placed at intersections. Neckdowns are also called bulbouts, nubs, knuckles or intersection narrowings. These devices slow vehicles by narrowing the roadway at the intersections. These devices may also be used to slow right-turning vehicles by reducing the curb radius at the corner. Neckdowns shorten the pedestrian crossing distance at the intersection.

Positive Impacts:
Slows speed of through and right turning traffic and may increase pedestrian safety by reducing the pedestrian crossing distance.

Negative Impacts:
May prevent large vehicles to turn on small-radius curves. May require removal of on-street parking.

The Criteria:
Criteria for installation of this device include the following:

- Two lane residential streets.
- Street width of 40’ or less.
- Posted speed limit of 25 miles per hour.
- 15% of traffic traveling 33 miles per hour or greater.
- ADT greater than 3,500 vehicles per day.
- Fire and Police Department Consent.
- Improved streets with curb and gutter.
- 6% or less street longitudinal grade.
- Centerline curve radius of 300’ or more.
- Street segment at least 750’ long.
- Single family homes or multi-dwelling residential units on one side of the street.
- Driveway access maintained.

Approval:
At the recommendation of the City Engineer, approval of City Council, support by 70% of residents living on the affected street segment and 100% approval of residents adjacent to the device to remove on-street parking.

Removal:
At the recommendation of the City Engineer, approval of City Council and support by 90% of residents, the neckdowns may be removed. Residents shall bear the full cost of the removal of the devices if not justified.

CENTER ISLANDS

Center islands are raised islands placed along the center of a street. These devices are used to slow traffic by narrowing the travel lanes. They are effectively used when installed downstream of an intersection or at main entrances to neighborhood streets. Center islands may be placed on a curved street where there is a history of speeding,

Positive Impacts:
Center islands are self-enforcing; the Police Department expends less effort to gain voluntary compliance to the speed limit. Center islands reduce traffic speeds and provide a pedestrian refuge at intersection locations.

Negative Impacts:
May slow response time of emergency vehicles and may require bicyclists to merge with traffic. May require removal of on-street parking spaces.

The Criteria:
Criteria for installation of this device include the following:

- Two lane residential streets.
- Street width of 40’ or less.
- Posted speed limit of 25 miles per hour.
- 15% of traffic traveling 33 miles per hour or greater.
- ADT greater than 3,500 vehicles per day.
- Fire and Police Department Consent.
- Improved streets with curb and gutter.
- 6% or less street longitudinal grade.
- Centerline curve radius of 300’ or more.
- Street segment at least 750’ long.
- Single family homes or multi-dwelling residential units on one side of the street.
- Driveway access maintained.

Approval:
At the recommendation of the City Engineer, approval of City Council, support by 70% of residents living on the affected street segment and 100% approval of residents adjacent to the device to remove on-street parking.

Removal:
At the recommendation of the City Engineer, approval of City Council and support by 90% of residents, the center islands may be removed. Residents shall bear the full cost of the removal of the devices if not justified.

SPEED TABLES/RAISED CROSSWALKS

Speed tables are flat-topped speed bumps consisting of ramp approaches at each end. These devices are typically installed on a straight segment of the street or an intersection. Speed tables are typically 22' in length with a height ranging from three inches to six inches. The ramp approach is six feet in length and the flat section is 10 feet in length. Vehicle speeds can be adjusted by varying the length and vertical displacement of the speed table. Speed tables can better accommodate fire vehicles and large vehicles because of the more gradual slope. Speed tables also can be marked as a raised crosswalk thus giving it a dual purpose if desired.

Positive Impacts:
Speed tables are self-enforcing; the Police Department expends less effort to gain voluntary compliance to the speed limit. Speed tables helps to reduce traffic speeds and may have less mechanical impacts on large vehicles such as trucks and buses.

Negative Impacts:
May slow response time of emergency vehicles and cause increase in noise.

The Criteria:
Criteria for installation of this device include the following:

- Two lane residential streets.
- Street width of 40' or less.
- Posted speed limit of 25 miles per hour.
- 15% of traffic traveling 33 miles per hour or greater.
- ADT greater than 3,500 vehicles per day.
- Fire and Police Department Consent.
- Improved streets with curb and gutter.
- 6% or less street longitudinal grade.
- Centerline curve radius of 300' or more.
- Street segment at least 750' long.
- Single family homes or multi-dwelling residential units on one side of the street.
- Driveway access maintained.

Approval:
At the recommendation of the City Engineer, approval of City Council, support by 70% of residents living on the affected street segment and 100% approval of residents adjacent to the device.

Removal:
At the recommendation of the City Engineer, approval of City Council and support by 90% of residents, the speed tables/raised crosswalks may be removed. Residents shall bear the full cost of the removal of the devices if not justified.

Program Process/Public Participation Element

Procedure

The total planning process for the Residential Traffic Calming Program will take approximately 11 months. The City of Fremont believes it is important to process requests in a timely manner. The City's program has been streamlined to effectively and efficiently utilize the City's resources while not compromising on the education and citizen participation element. The City's Residential Traffic Calming Program is a structured process that is responsive to the needs of the neighborhood.

The residential traffic calming program will be initiated by a citizens request for speed control along a certain street segment or if City Staff determines it is appropriate to analyze speeding problems in a given area. Staff will conduct a preliminary analysis to determine if a speeding problem exists. If a speeding problem is identified, an education and enforcement effort will be conducted. If the speeding problem persists following three months of education and enforcement, the City will then consider the installation of speed lumps or alternative traffic calming devices. This process may involve some or all of the following steps: hold neighborhood meetings, establish Citizen Committee, formulate solutions and alternate plans, post card survey of residents, priority ranking of requests, implementation/construction of traffic calming devices and nine-month review of the project to measure the devices effectiveness. In some cases it may not be necessary to follow every step.

The following is a description of the program process and public participation element:

Step 1 – Initiation

Step 1 is the initiation of the process by a citizens request for speed control along a certain street segment or if City Staff determines it is appropriate to analyze speeding problems in a given area. Staff's current practice is to deal with the request on a direct basis and to respond to the resident within a short time period. This means that instances where the City receives an inquiry about neighborhood traffic issues, Staff will respond with traditional studies and actions. Ensuring that simple or incidental request can be addressed by the Traffic Engineering Staff without the necessity of a petition.

Step 2 – Identification of Traffic Issue(s)

Staff will identify clearly the issue or problem by collecting the appropriate traffic information, such as accident history, speed and volume data, etc. and perform an analysis to determine if a speeding problem exist. Staff will review the roadway signing, striping and traffic controls in the area and in some cases conduct field observations. If appropriate, signing/striping changes or additions will than be undertaken by the City. If the analysis indicates a speeding problem exists, an appropriate education and enforcement plan will be initiated. Federal and State speed limit guidelines define the 85th percentile speed as a "reasonable speed" or the speed in which 85% of motorists travel at or below. Speed surveys indicate that many residential streets in Fremont with a

posted speed limit of 25 miles per hour have an 85th percentile speed ranging from 30-32 miles per hour. Staff considers street segments with 85th percentile speeds equal to or greater than 33 miles per hour as having a speed problem.

Step 3 – Education and Enforcement

If a street is determined to have a speeding problem, education and enforcement measures will be implemented. Educating a neighborhood of a speeding problem or a traffic concern may comprise of conducting meetings, mailing letters, distributing flyers, etc. A radar speed trailer may be deployed by the police department to inform motorists of their driving speeds or the use of stealth box to determine if a speeding problem exists on the street segment. Also, additional signing or striping may be installed to provide awareness of the posted 25 mile per hour speed limit. In conjunction with educating the neighborhood residents, Traffic Engineering will notify the City's Police Department of the speeding problem and request traffic enforcement. The intent of the education and enforcement process is to modify motorists behavior hopefully resulting in lower traffic speeds and a safer environment for all users and residents.

However, in instances where it is obvious or becomes obvious that the request is likely to lead to the consideration of installation of traffic calming devices, the petition process can be initiated and conducted in conjunction with the education and enforcement process. These street segments typically have a history of traffic complaints, they may have higher than normal number of accidents and regularly have been the focus of traffic enforcement efforts.

Step 4 – Review of Education and Enforcement

Following three months of education and enforcement the traffic conditions will be reevaluated. Following the performance of a new analysis and the results indicate that the speeds are at or below 32 miles per hour, periodic enforcement and education will continue to maintain long-term effects of compliance, and no further action will be necessary. If the analysis indicates a speeding problem exists (85th percentile speed is equal or greater than 33 miles per hour), education and enforcement will continue. Staff will determine if the criteria to install traffic calming devices are satisfied. Staff will also determine through a petition process if the neighborhood residents support installation of traffic calming devices.

Step 5 – Implementation of Speed Lump Policy

The City's Speed Lump Policy will only apply to residential streets where the ADT is between 800 and 3,500 vehicles per day. The process from inception to the final installation of the speed lumps is repeated once every fiscal year. The speed lump policy process is as follows:

A. A warrant analysis will be conducted to determine if the residential street segment is eligible for speed lump installation.

B. If a street segment satisfies the criteria for the installation of a speed lump, the requester(s) is asked to complete a City furnished petition form. The City will consider resident support for traffic calming in determining whether or not there is a need to reduce traffic speeds in a project area. If petitions in support of traffic calming are signed by less than 70% of residents within the project area, the City will proceed with a traffic calming plan only if all other criteria outlined in this Policy support a need for installation based on safety conditions. Only one vote per residential unit will be applied towards the petition.

C. Following receipt of a completed petition, a priority list for all candidate street segments is established. Points are allocated to each street segment based on traffic volumes, vehicle speeds, vicinity to school(s) and traffic accidents.

D. Staff prepares a report to Council for approval and funding of the top ranked street segments.

E. Following Council approval and funding of top ranked street segments, Staff prepares a California Environmental Quality Act (CEQA) analysis, prepares plans and specifications and puts project out to bid. Installation of speed lumps is repeated once a year.

F. Should the residents desire to remove the speed lumps, Staff will collect data and perform a new analysis based on a review of accident data, speed data, volume data and other special studies pertinent to the project. Staff will consider resident support for removal of speed lumps if supported by 90% of the residents living on the affected street segment. Based on these factors and safety considerations, the City will make a determination to retain or remove the devices. A recommendation by the City Engineer to remove the traffic calming devices will require the approval of the City Council. Any associated cost for the removal of the traffic calming devices not justified by the project goals and objectives will be fully borne by the residents.

Step 6 – Implementation of Alternative Traffic Calming Devices

If a speeding problem exists and the street ADT exceeds 3,500 vehicles per day, the street segment will be considered for installation of alternative traffic calming devices.

A. Preliminary Petition - Staff will request that resident(s) submit a petition to the City to determine if the concern is widespread and there is consensus among the neighborhood to pursue installation of alternative traffic calming devices such as traffic circles, center islands, chicanes (triangular islands), neckdowns, modified T-intersections and speed tables/raised crosswalks. Requester will be asked to circulate and complete a City furnished petition form for residents living on the affected street. If petitions in support of traffic calming are signed by less than 70% of residents within the project area, the City will proceed with a traffic calming plan only if all

other criteria outlined in this Policy support a need for installation based on safety conditions. Only one vote per residential unit will be counted towards the petition.

B. First Neighborhood Meeting - A neighborhood meeting will be conducted within six weeks after Staff receipt of the completed petition. Staff will notify all the residents living on the street and residents within 300 feet of the affected street segment. Staff may also notify residents outside the 300' boundary if there is reason to believe adjacent parallel streets may be impacted by the project. The notice sent to residents will explain the purpose of the meeting, provide background information about the traffic issues, actions completed to date and any proposed actions. The initial neighborhood meeting will be conducted to inform and educate residents of the City's Residential Traffic Calming Program, the existing neighborhood traffic conditions, define roles and responsibilities of residents, and update residents of the events that have occurred up to that point.

   Staff will ask for volunteers to serve on a Citizen Committee. The size of the committee will be a minimum of three members. An odd number of committee members will be required in case there is a need for any tie-breaking vote. Committee members who serve on the committee must be a resident living on the affected street segment(s). In addition, only residents living on the affected street segment(s) will be eligible to vote for any measures proposed. Only one vote per residential unit will be permitted.

C. Development of Solutions and Alternate Plans – Once the Citizen Committee is established, Staff will conduct the first meeting with the Citizen Committee using interest based approach. The first objective of the Committee meeting will be to establish Committee ground rules, membership (add or remove membership) and scheduling. The second goal is to determine the project goals and objectives. The City's Residential Traffic Calming Policy has defined four standard objectives. These objectives will be included in all residential traffic calming projects in addition to any other traffic goals the neighborhood residents may want Staff to consider. These objectives will provide the committee and Staff direction and a standard to measure the success of the project. A Staff member will take meeting minutes to document all discussions and actions during the meeting.

   Dependent on the progress and accomplishments of the initial meeting, additional meetings with the Citizen Committee may be scheduled to provide Staff and Committee members an opportunity to educate each other about the neighborhood's concern and to engage in discussions regarding possible solutions. Additional data or studies may be needed during this process in order to better understand the problems. Following an analysis of the information collected, education and investigation by the Citizen Committee and Staff, the issues should become more defined. Discussion will include the advantages and disadvantages of each device as well as the economic feasibility of each device considered.

The Citizen Committee involvement process is vital, the Committee's role will include educating the neighborhood residents about the residential traffic calming program, informing residents of the project status and participate in the selection of the traffic calming devices.

Once the Committee and Staff has defined and gained a thorough understanding of the problems, the group will formulate solutions and alternatives. Staff will include the residents and Citizen Committee suggestions in the conceptual plans wherever feasible. If alternative solutions are presented, discussion of the positives and negatives of each alternative will be presented. The solutions considered by the Citizen Committee would include alternatives with the most benefits.

D. Second Neighborhood Meeting – Once a solution and/or alternative plan(s) have been selected, a second neighborhood meeting will be scheduled within two months of the first neighborhood meeting to communicate the proposed solution or alternatives to the neighborhood. At the meeting, Staff and the Citizen Committee will explain the decision making process that led to the selection of the recommended solution and/or alternate plans. This meeting will allow the residents an opportunity to provide input to Staff about the proposed solutions and discuss any issues with residents that were not addressed in previous meetings. It is important that Staff, the Citizen Committee and neighborhood residents obtain agreement or support of the proposed solution. If residents are in agreement with the proposed plan and/or alternative(s) at the second neighborhood meeting, a post card survey will be mailed to the residents living on the affected street.

E. Third Neighborhood Meeting - If necessary, a third neighborhood meeting will be conducted to present the revised conceptual plans and alternatives to the neighborhood if there were significant changes to the conceptual plans presented in the second neighborhood meeting. Staff and residents will work to obtain agreement or support of the proposed solution and/or alternative(s).

F. Polling and Notification – Following the neighborhood meetings, residents will be sent notices describing the proposed residential traffic calming plan. It will include background information about the process and how the proposed solution and alternative(s) were formulated. Only residents living on the affected street segment(s) will be polled using a post card survey to select the most favored solution or alternative(s). Only one vote per residential unit will be applied towards the survey. Following completion of the post card survey, a letter will be sent to the residents within the notification area describing the poll results.

G. Priority Ranking – If approved by 70% or more of the affected residents living on the street, Staff will establish a priority list for all candidate street segments. Points are allocated to each street segment based on traffic volumes, speed data, vicinity to school(s) and traffic accidents. Streets with the most points will be ranked at the top of the priority list and will have the best chance of being selected for implementation.

H. Council Approval and Funding of Project - Upon the recommendation of the City Engineer and approval by the City Council of the top ranked streets, the traffic calming device(s) will be installed. The number of street segments selected for funding will be based on the cost of the traffic calming devices, the number of traffic calming devices needed and the funding allocated by the City Council for each fiscal year.

I. Installation of Alternative Traffic Calming Devices – Following Council approval and funding of top ranked street segments, Staff prepares a California Environmental Quality Act (CEQA) analysis, prepares plans and specifications and puts project out to bid. Installation of alternative traffic calming devices is repeated once every two years. The traffic calming device(s) will be installed with landscaping.

J. Nine Month Review –Following the installation of the traffic calming devices, an evaluation will be conducted for up to nine months to measure the effectiveness of the traffic calming devices and to determine if the program objectives were met. The evaluation will be based on the following criteria:

1. A review of the 85th percentile speed will be conducted to determine if overall traffic speeds were reduced.

2. Vehicle counts will be collected to determine if there was diversion of traffic to parallel residential streets. Traffic diversion is permitted if traffic is moved to major arterial streets or is within the allowable increase of 500 vehicles per day or 25% increase of the existing ADT. An increase of up to 25% of the existing ADT or 500 vehicles per day, whichever is less would trigger an analysis of the adjacent residential street(s).

3. A review of the accident history will be conducted to identify any adverse impacts the traffic calming devices may have caused. By slowing traffic, eliminating conflicting movements, and sharpening driver attention, installation of traffic calming devices may reduce the number of accidents.

4. Fire and Police Departments will be consulted to provide input about any impacts they may have experienced. Field observations and or discussions may also be conducted with AC transit, Waste Management and other service providers to ensure that services provided to the residents are not significantly impacted.

If the program objectives are satisfied as evidenced in the evaluation no further actions will be taken. If program objectives are not met, Staff will prepare alternatives and seek direction from the City Council.

K. Should the residents desire to remove the alternative traffic calming devices after evaluation results indicate the program objectives were satisfied, Staff will collect data and perform a new analysis based on a review of accident data, speed data,

volume data and other special studies pertinent to the project. Staff will consider resident support for the removal of the devices if supported by 90% of the residents living on the affected street segment. Based on these factors and safety considerations, the City will make a determination to retain or remove the devices. A recommendation by the City Engineer to remove the traffic calming devices will require the approval of the City Council. Any associated cost for the removal of the traffic calming devices not justified by the project goals and objectives will be fully borne by the residents.

SOURCE REFERENCES

1. “Traffic Calming State of the Practice”, Reid Ewing, Institute of Traffic Engineers & FHWA, 1999.

2. “Transportation Planning Handbook, Second Edition”, John D. Edwards, Institute of Transportation Engineers, 1999.

3. “Neighborhood Traffic Management Program,” City of Mountain View, December 11, 1996.

4. “Possible Neighborhood Traffic Calming Methods, Report to Council 97-040,” City of Sunnyvale, February 4, 1997.

5. “City of Fremont General Plan,” Chapter 8 - Transportation Chapter, May 7, 1991.

6. “Evaluation of the Traffic Calming Pilot Program on Eggers Drive, and Accept Completion of Permanent Roadway Features,” City of Fremont Report to Council, Item 7.1, April 3, 2001.

7. “Establishment of a Policy on the Application of Speed Bumps On Two-Lane Residential Streets in Fremont,” City of Fremont Report to Council, Item 7.2, June 13, 1995.